IN THE CLAIMS

Please amend the claims as follows:

1. (original) A sound reproduction system comprising a digital audio signal input (1), a digital audio signal processor (2, DSP) and a digital audio signal output (3) wherein the digital signal processor (2, DSP) comprises a high pass (HP) filter (21) with a high pass frequency (f), an amplifier (22) for a signal filtered by the HP filter, and a low pass (LP) filter (23) with a low pass frequency (f') for filtering the signal after amplification by the amplifier (22) and for providing an output signal, and the digital processor comprises an establisher (24, 25) for establishing the high pass frequency or the low pass frequency and a matcher (26) for matching the high pass frequency and low pass frequency of the high pass filter and low pass filter respectively to each other.

2. (original) A sound reproduction system as claimed in claim 1, wherein the system comprises a sensor for measuring background noise level, and comprises an element having as an input the measured noise level and as an output the HP cut-off frequency, wherein the HP cut-off frequency increases as the background noise level increases, and the LP cut-off frequency decreases as the HP cut-off frequency increases.

3. (original) A sound reproduction system as claimed in claim 2, comprising a single LP filter with a variable cut-off frequency.

4. (original) A sound reproduction system as claimed in claim 2, comprising a set of LP filters with different LP cut-off frequency and the matcher is arranged to send the signal after amplification to one of the set of LP filters, in dependence on the HP cut-off frequency.

5. (currently amended) A sound reproduction system as claimed in claim 1~~ or 2~~, wherein the establisher is arranged for establishing the cut-off frequency of the high pass filter in dependence on the average amplification in the amplification stage.

6. (currently amended) A sound reproduction system as claimed in claim 1~~ or 2~~, wherein the establisher is arranged to set the cut-off frequency f' of the LP filter at fs/2, wherein fs is the sample frequency and the matcher matches the high pass frequency f to the low pass frequency f'.

7. (original) A sound reproduction system as claimed in claim 6, comprising a single HP filter with a variable cut-off frequency.

8. (original) A sound reproduction system as claimed in claim 6, comprising a set of HP filters with different HP cut-off frequency and the matcher is arranged to send the signal before amplification to one of the set of HP filters, in dependence on the LP cut-off frequency.

9. (original) A sound reproduction system as claimed in claim 1, wherein the HP cut-off frequency (f) is a frequency between 300 Hz and 2 kHz.

10. (original) A sound reproduction system as claimed in claim 1, wherein the LP cut-off frequency lies above 2 kHz and fs/2, where fs is the sample frequency.

11. (original) Digital audio signal processor comprising a high pass (HP) filter (21) with a high pass frequency (f), an amplifier (22) for a signal filtered by the HP filter, and a low pass (LP) filter (23) with a low pass frequency (f') for filtering the signal after amplification by the amplifier (22) and for providing an output signal, and the digital processor comprises an establisher (24, 25) for establishing the high pass frequency or the low pass frequency and a matcher (26) for matching the high pass frequency

and low pass frequency of the high pass filter and low pass filter respectively to each other.

12. (original) A method for processing digital sound signals in which method the frequency components below a HP cut-off frequency f is removed prior to amplification, and after amplification the frequency component above a LP cut-off frequency are removed, wherein the values of the HP cut-off frequency and the LP cut-off frequency f' are matched.

13. (original) A method as claimed in claim 12, wherein the HP cut-off frequency lies between 300 and 2 kHz.

14. (original) A method as claimed in claim 12, wherein a noise level (N) is measured and the HP cut-off frequency f is determined in dependence on the measured noise level.

15. (currently amended) Computer program comprising program code means for performing a method as claimed in ~~any one of the claims 11 to 14~~claim 11 when said program is run on a computer.

16. (currently amended) Computer program product comprising computer program code means stored on a computer readable medium

for performing a method as claimed in ~~any one of the claims 11 to 14~~claim 11.